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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Wolfgang Kleinert

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EXAMINER

SAINT SURIN, JACQUES M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/539,270	Applicant(s) KLEINERT, WOLFGANG	
	Examiner J M. SAINT SURIN	Art Unit 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 2-5, 7-9 and 11-13 are rejected under 35 U.S.C. 102 (b) as being anticipated by Grobs et al. (Characterization of Flaw Location, ALOK System).

Regarding claim 13, Grobs et al. discloses a method of representing echo signals obtained using an ultrasonic inspection apparatus for non-destructive inspection of a test body, said method comprising:

placing an angle beam probe with a transmitter that is connected to the probe and generates transmitter pulses it delivers to the probe and a receiver that is connected to the probe and receives echo signals onto the front surface, insonifying ultrasonic pulses into the test body at a certain angle (a) (a block diagram of the data acquisition device and a photograph of the ultrasonic hardware are shown in Fig. 2. A multi probe system is used; the pulse-echo inspection uses probes with angles of incidence of 0 , 45° 60° and 70 degrees, the tandem inspection uses pairs of probes optimized for several depth zones to achieve irradiation of the flaw from different directions(see pp 85, col. 1, last paragraph); Grobs further discloses the probes are chosen such that the beams are divergent in the incidence plane and tightly focused

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transverse to the incidence plane and the time intervals for the detection gates are set so that the sound paths will include reflections at the backwall thus allowing complete scanning of the defect region (pp 85, col. 2, last paragraph).

displaying in a cross-sectional image the echo signals received on a monitor with a display in such a manner that at least one front surface and one rear wall of the probe are visible (Figs. 3-4),

finding and growing a flaw from a first disposition of the probe, the extension of the flaw with respect to the first disposition of the probe being determined using a comparative method and being represented true to scale on the display as the first flaw signal in a first measurement image (see: Fig. 6 and page 87, first paragraph of col. 1),

storing the first measurement image captured (pages 86 and 87, col. 1, last paragraph), finding and growing the same flaw from a second disposition of the probe, the extension of the flaw with respect to the second disposition of the probe being determined using a comparative method and being represented true to scale on the display as the second flaw signal in a second measurement image, storing the second measurement image captured (see Figs. 8-9 and pages 86 and 87, last paragraph);

concurrently representing the superimposed first and second measurement images in an evaluation image in such a manner that the first and the second flaw signals are visible (see :Fig. 11). Grobs further discloses with this transverse extension, the number of dynamic curves relevant for the flaw description can be, minimized, because only the curves inside the delimitation have to be processed. For these scans,

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the reconstructions inside the entrance planes are superposed for all testing functions and then, considering the lateral dimension, combined to a three-dimensional reconstruction (see page 89, col. 2, first paragraph).

Regarding claim 2, Grobs et al. discloses the method as set forth in claim 3, comprising: representing a sound path, which is divided into legs, in the measurement images and in the evaluation image (see: Fig. 3 and page 87, col. 1, first paragraph).

Regarding claim 3, Grobs et al. discloses the method as set forth in claim 13, further comprising: representing various flaw signals in different ways. (see : Figs 4 -5)

Regarding claim 4, Grobs et al. discloses the method as set forth in claim 2, wherein the various legs are represented each in a different way (see: Figs. 6-7).

Regarding claim 5, Grobs et al. discloses the method as set forth in claim 3, wherein the flaw signals are each represented according to the sound path and/or the leg from which they originate (see Figs. 9 and 10).

Regarding claim 7, Grobs et al. discloses the method as set forth in the claim 13, further comprising: representing the received echo signals ~~obtained are additionally represented~~ in a top view image in such a manner that the extension of the flaw in the longitudinal plane of the test body, that is to say in the plane oriented substantially transverse to the cross-sectional image, is displayed on the display (see: Figs. 8-10).

Regarding claim 8, Grobs et al. discloses the method as set forth in claim 13, ~~wherein~~ further comprising: solidly connecting the test body ~~is solidly connected to a~~

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means that serves to determine the respective position of the angle beam probe on the surface of the test body (page 87).

Regarding claim 9, Grobs et al. discloses the method as set forth in claim 13, ~~wherein, taking into consideration limit values in terms of amplitude and/or spatial limits,~~ further comprising: representing only that region of the test body to be tested and/or such flaw signals is/are represented on the display that is/are of interest for inspection, wherein said region of the test body and/or flaw signals is/are determined taking into consideration limit values in terms of amplitude and/or spatial limits (page 87).

. Regarding claim 11, Grobs et al. discloses the method as set forth in claim 13, wherein the flaw is located between the first disposition and the second disposition of the angle beam probe (see Figs 9-10).

Regarding claim 12, Grobs et al. discloses the method as set forth in claim 13, wherein the first disposition and the second disposition of the angle beam probe are located on the same side of the flaw but are spaced a different distance from said flaw.(see: Figs. 6-10).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 6, 10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grobs et al. (Characterization of Flaw Location, ALOK System) in view of de Sterke (US Patent 4,375,165).

Regarding claim 6, Grobs et al. does not disclose wherein said test body comprises a weld seam, said method further comprising: inspecting [[a]] the weld seam, and representing said weld seam is also represented in the cross-sectional images, the measurement images and the evaluation image. De Sterke discloses inspecting circumferential welded joints in pipe lines using ultrasonic waves, in FIG. 5 the reference 71 indicates an example of a weld shape (col. 1, lines 41-43). Regarding claims 10 and 14, de Sterke discloses the type and dimensions of said test defects are defined in the code of an inspection rule which may be used in consultation with the principal or printout made from the test segment (col. 5, lines 1-4). It would have been obvious to one having ordinary skill in the art to utilize in Grobs et al. the welded seam of de Sterke because the crystals are used for examining defects extending

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transversely of the weld such as the defect for instance, by reflection of the ultrasonic wave against the underside of the material (the inner pipe) thereby realizing a more effective inspection.

6. Applicant's arguments with respect to claims 2-14 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to J M. SAINT SURIN whose telephone number is (571)272-2206. The examiner can normally be reached on Mondays to Fridays between 9:30 A.M and 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron L. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacques M SAINT SURIN/

Examiner, Art Unit 2856